

Leu Tyr Tyr Gln Asp Gln Leu Leu Pro Val Ser Arg Ile Ile Val His	
65	70 75 80
cca cag ttc tac acc gcc cag atc gga gcg gac atc gcc ctg ctg gag	288
Pro Gln Phe Tyr Thr Ala Gln Ile Gly Ala Asp Ile Ala Leu Leu Glu	
	85 90 95
ctg gag gag ccg gtg aac gtc tcc agc cac gtc cac acg gtc acc ctg	336
Leu Glu Glu Pro Val Asn Val Ser Ser His Val His Thr Val Thr Leu	
	100 105 110
ccc cct gcc tca gag acc ttc ccc ccg ggg atg ccg tgc tgg gtc act	384
Pro Pro Ala Ser Glu Thr Phe Pro Pro Gly Met Pro Cys Trp Val Thr	
	115 120 125
ggc tgg ggc gat gtg gac aat gat gag cgc ctc cca ccg cca ttt cct	432
Gly Trp Gly Asp Val Asp Asn Asp Glu Arg Leu Pro Pro Pro Phe Pro	
	130 135 140
ctg aag cag gtg aag gtc ccc ata atg gaa aac cac att tgt gac gca	480
Leu Lys Gln Val Lys Val Pro Ile Met Glu Asn His Ile Cys Asp Ala	
	145 150 155 160
aaa tac cac ctt ggc gcc tac acg gga gac gac gtc cgc atc gtc cgt	528
Lys Tyr His Leu Gly Ala Tyr Thr Gly Asp Asp Val Arg Ile Val Arg	
	165 170 175
gac gac atg ctg tgt gcc ggg aac acc cgg agg gac tca tgc cag ggc	576
Asp Asp Met Leu Cys Ala Gly Asn Thr Arg Arg Asp Ser Cys Gln Gly	
	180 185 190
gac tcc gga ggg ccc ctg gtg tgc aag gtg aat ggc acc tgg ctg cag	624
Asp Ser Gly Gly Pro Leu Val Cys Lys Val Asn Gly Thr Trp Leu Gln	
	195 200 205
gcg ggc gtg gtc agc tgg ggc gag ggc tgt gcc cag ccc aac cgg cct	672
Ala Gly Val Val Ser Trp Gly Glu Gly Cys Ala Gln Pro Asn Arg Pro	
	210 215 220
ggc atc tac acc cgt gtc acc tac tac ttg gac tgg atc cac cac tat	720
Gly Ile Tyr Thr Arg Val Thr Tyr Tyr Leu Asp Trp Ile His His Tyr	
	225 230 235 240
gtc ccc aaa aag ccg	735
Val Pro Lys Lys Pro	
	245

<210> 2
 <211> 245
 <212> PRT
 <213> Homo sapiens

<400> 2

Ile Val Gly Gly Gln Glu Ala Pro Arg Ser Lys Trp Pro Trp Gln Val
 1 5 10 15

Ser Leu Arg Val His Gly Pro Tyr Trp Met His Phe Cys Gly Gly Ser
 20 25 30

Leu Ile His Pro Gln Trp Val Leu Thr Ala Ala His Cys Val Gly Pro
 35 40 45

Asp Val Lys Asp Leu Ala Ala Leu Arg Val Gln Leu Arg Glu Gln His
 50 55 60

Leu Tyr Tyr Gln Asp Gln Leu Leu Pro Val Ser Arg Ile Ile Val His
 65 70 75 80

Pro Gln Phe Tyr Thr Ala Gln Ile Gly Ala Asp Ile Ala Leu Leu Glu
 85 90 95

Leu Glu Glu Pro Val Asn Val Ser Ser His Val His Thr Val Thr Leu
 100 105 110

Pro Pro Ala Ser Glu Thr Phe Pro Pro Gly Met Pro Cys Trp Val Thr
 115 120 125

Gly Trp Gly Asp Val Asp Asn Asp Glu Arg Leu Pro Pro Phe Pro
 130 135 140

Leu Lys Gln Val Lys Val Pro Ile Met Glu Asn His Ile Cys Asp Ala
 145 150 155 160

Lys Tyr His Leu Gly Ala Tyr Thr Gly Asp Asp Val Arg Ile Val Arg
 165 170 175

Asp Asp Met Leu Cys Ala Gly Asn Thr Arg Arg Asp Ser Cys Gln Gly
 180 185 190

Asp Ser Gly Gly Pro Leu Val Cys Lys Val Asn Gly Thr Trp Leu Gln
 195 200 205

Ala Gly Val Val Ser Trp Gly Glu Gly Cys Ala Gln Pro Asn Arg Pro
 210 215 220

Gly Ile Tyr Thr Arg Val Thr Tyr Tyr Leu Asp Trp Ile His His Tyr
225 230 235 240

Val Pro Lys Lys Pro
245

<210> 3
<211> 40
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence:PCR Primer

<400> 3
gggccctcg agaaaagaat cgtcgggggt caggaggccc 40

<210> 4
<211> 40
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence:PCR Primer

<400> 4
ccactatgtc ccaaaaagc cgtgaagcgg ccgccgtcgt 40

<210> 5
<211> 771
<212> DNA
<213> Homo sapiens

<220>
<221> CDS
<222> (7)..(753)

<400> 5
gggccc ctc gag aaa aga atc gtc ggg ggt cag gag gcc ccc agg agc 48
Leu Glu Lys Arg Ile Val Gly Gly Gln Glu Ala Pro Arg Ser
1 5 10

aag tgg ccc tgg cag gtg agc ctg aga gtc cac ggc cca tac tgg atg 96
Lys Trp Pro Trp Gln Val Ser Leu Arg Val His Gly Pro Tyr Trp Met
15 20 25 30

cac ttc tgc ggg ggc tcc ctc atc cac ccc cag tgg gtg ctg acc gca 144
His Phe Cys Gly Gly Ser Leu Ile His Pro Gln Trp Val Leu Thr Ala
35 40 45

gcg cac tgc gtg gga ccg gac gtc aag gat ctg gcc gcc ctc agg gtg 192
Ala His Cys Val Gly Pro Asp Val Lys Asp Leu Ala Ala Leu Arg Val
50 55 60

caa ctg cgg gag cag cac ctc tac tac cag gac cag ctg ctg ccg gtc 240
Gln Leu Arg Glu Gln His Leu Tyr Tyr Gln Asp Gln Leu Leu Pro Val
65 70 75

agc agg atc atc gtg cac cca cag ttc tac acc gcc cag atc gga gcg 288
Ser Arg Ile Ile Val His Pro Gln Phe Tyr Thr Ala Gln Ile Gly Ala
80 85 90

gac atc gcc ctg ctg gag ctg gag gag ccg gtg aac gtc tcc agc cac 336
Asp Ile Ala Leu Leu Glu Leu Glu Glu Pro Val Asn Val Ser Ser His
95 100 105 110

gtc cac acg gtc acc ctg ccc cct gcc tca gag acc ttc ccc ccg ggg 384
Val His Thr Val Thr Leu Pro Pro Ala Ser Glu Thr Phe Pro Pro Gly
115 120 125

atg ccg tgc tgg gtc act ggc tgg ggc gat gtg gac aat gat gag cgc 432
Met Pro Cys Trp Val Thr Gly Trp Gly Asp Val Asp Asn Asp Glu Arg
130 135 140

ctc cca ccg cca ttt cct ctg aag cag gtg aag gtc ccc ata atg gaa 480
Leu Pro Pro Pro Phe Pro Leu Lys Gln Val Lys Val Pro Ile Met Glu
145 150 155

aac cac att tgt gac gca aaa tac cac ctt ggc gcc tac acg gga gac 528
Asn His Ile Cys Asp Ala Lys Tyr His Leu Gly Ala Tyr Thr Gly Asp
160 165 170

gac gtc cgc atc gtc cgt gac gac atg ctg tgt gcc ggg aac acc ccg 576
Asp Val Arg Ile Val Arg Asp Asp Met Leu Cys Ala Gly Asn Thr Arg
175 180 185 190

agg gac tca tgc cag ggc gac tcc gga ggg ccc ctg gtg tgc aag gtg 624
Arg Asp Ser Cys Gln Gly Asp Ser Gly Gly Pro Leu Val Cys Lys Val
195 200 205

aat ggc acc tgg ctg cag gcg ggc gtg gtc agc tgg ggc gag ggc tgt 672
Asn Gly Thr Trp Leu Gln Ala Gly Val Val Ser Trp Gly Glu Gly Cys
210 215 220

gcc cag ccc aac cgg cct ggc atc tac acc cgt gtc acc tac tac ttg 720
 Ala Gln Pro Asn Arg Pro Gly Ile Tyr Thr Arg Val Thr Tyr Tyr Leu
 225 230 235

gac tgg atc cac cac tat gtc ccc aaa aag ccg tgaagcggcc gccgtcgt 771
 Asp Trp Ile His His Tyr Val Pro Lys Lys Pro
 240 245

<210> 6
 <211> 249
 <212> PRT
 <213> Homo sapiens

<400> 6
 Leu Glu Lys Arg Ile Val Gly Gly Gln Glu Ala Pro Arg Ser Lys Trp
 1 5 10 15

Pro Trp Gln Val Ser Leu Arg Val His Gly Pro Tyr Trp Met His Phe
 20 25 30

Cys Gly Gly Ser Leu Ile His Pro Gln Trp Val Leu Thr Ala Ala His
 35 40 45

Cys Val Gly Pro Asp Val Lys Asp Leu Ala Ala Leu Arg Val Gln Leu
 50 55 60

Arg Glu Gln His Leu Tyr Tyr Gln Asp Gln Leu Leu Pro Val Ser Arg
 65 70 75 80

Ile Ile Val His Pro Gln Phe Tyr Thr Ala Gln Ile Gly Ala Asp Ile
 85 90 95

Ala Leu Leu Glu Leu Glu Glu Pro Val Asn Val Ser Ser His Val His
 100 105 110

Thr Val Thr Leu Pro Pro Ala Ser Glu Thr Phe Pro Pro Gly Met Pro
 115 120 125

Cys Trp Val Thr Gly Trp Gly Asp Val Asp Asn Asp Glu Arg Leu Pro
 130 135 140

Pro Pro Phe Pro Leu Lys Gln Val Lys Val Pro Ile Met Glu Asn His
 145 150 155 160

Ile Cys Asp Ala Lys Tyr His Leu Gly Ala Tyr Thr Gly Asp Asp Val
 165 170 175

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Arg Ile Val Arg Asp Asp Met Leu Cys Ala Gly Asn Thr Arg Arg Asp
 180 185 190

Ser Cys Gln Gly Asp Ser Gly Gly Pro Leu Val Cys Lys Val Asn Gly
 195 200 205

Thr Trp Leu Gln Ala Gly Val Val Ser Trp Gly Glu Gly Cys Ala Gln
 210 215 220

Pro Asn Arg Pro Gly Ile Tyr Thr Arg Val Thr Tyr Tyr Leu Asp Trp
 225 230 235 240

Ile His His Tyr Val Pro Lys Lys Pro
 245

<210> 7
 <211> 27
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Description of Artificial Sequence: Mutagenesis
 Oligo

<400> 7
 gaggagccgg tgaaggtctc cagccac 27

<210> 8
 <211> 771
 <212> DNA
 <213> Homo sapiens

<220>
 <221> CDS
 <222> (7)..(753)

<400> 8
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 1 5 10

aag tgg ccc tgg cag gtg agc ctg aga gtc cac ggc cca tac tgg atg 96
 Lys Trp Pro Trp Gln Val Ser Leu Arg Val His Gly Pro Tyr Trp Met
 15 20 25 30

cac ttc tgc ggg ggc tcc ctc atc cac ccc cag tgg gtg ctg acc gca	144
His Phe Cys Gly Gly Ser Leu Ile His Pro Gln Trp Val Leu Thr Ala	
35 40 45	
gcg cac tgc gtg gga ccg gac gtc aag gat ctg gcc gcc ctc agg gtg	192
Ala His Cys Val Gly Pro Asp Val Lys Asp Leu Ala Ala Leu Arg Val	
50 55 60	
caa ctg cgg gag cag cac ctc tac tac cag gac cag ctg ctg ccg gtc	240
Gln Leu Arg Glu Gln His Leu Tyr Tyr Gln Asp Gln Leu Leu Pro Val	
65 70 75	
agc agg atc atc gtg cac cca cag ttc tac acc gcc cag atc gga gcg	288
Ser Arg Ile Ile Val His Pro Gln Phe Tyr Thr Ala Gln Ile Gly Ala	
80 85 90	
gac atc gcc ctg ctg gag ctg gag gag ccg gtg aag gtc tcc agc cac	336
Asp Ile Ala Leu Leu Glu Leu Glu Glu Pro Val Lys Val Ser Ser His	
95 100 105 110	
gtc cac acg gtc acc ctg ccc cct gcc tca gag acc ttc ccc ccg ggg	384
Val His Thr Val Thr Leu Pro Pro Ala Ser Glu Thr Phe Pro Pro Gly	
115 120 125	
atg ccg tgc tgg gtc act ggc tgg ggc gat gtg gac aat gat gag cgc	432
Met Pro Cys Trp Val Thr Gly Trp Gly Asp Val Asp Asn Asp Glu Arg	
130 135 140	
ctc cca ccg cca ttt cct ctg aag cag gtg aag gtc ccc ata atg gaa	480
Leu Pro Pro Pro Phe Pro Leu Lys Gln Val Lys Val Pro Ile Met Glu	
145 150 155	
aac cac att tgt gac gca aaa tac cac ctt ggc gcc tac acg gga gac	528
Asn His Ile Cys Asp Ala Lys Tyr His Leu Gly Ala Tyr Thr Gly Asp	
160 165 170	
gac gtc cgc atc gtc cgt gac gac atg ctg tgt gcc ggg aac acc ccg	576
Asp Val Arg Ile Val Arg Asp Asp Met Leu Cys Ala Gly Asn Thr Arg	
175 180 185 190	
agg gac tca tgc cag ggc gac tcc gga ggg ccc ctg gtg tgc aag gtg	624
Arg Asp Ser Cys Gln Gly Asp Ser Gly Gly Pro Leu Val Cys Lys Val	
195 200 205	
aat ggc acc tgg ctg cag gcg ggc gtg gtc agc tgg ggc gag ggc tgt	672
Asn Gly Thr Trp Leu Gln Ala Gly Val Val Ser Trp Gly Glu Gly Cys	
210 215 220	

gcc cag ccc aac cgg cct ggc atc tac acc cgt gtc acc tac tac ttg 720
Ala Gln Pro Asn Arg Pro Gly Ile Tyr Thr Arg Val Thr Tyr Tyr Leu
225 230 235

gac tgg atc cac cac tat gtc ccc aaa aag ccg tgaagcggcc gccgctcgt 771
Asp Trp Ile His His Tyr Val Pro Lys Lys Pro
240 245

<210> 9
<211> 249
<212> PRT
<213> Homo sapiens

<400> 9
Leu Glu Lys Arg Ile Val Gly Gly Gln Glu Ala Pro Arg Ser Lys Trp
1 5 10 15

Pro Trp Gln Val Ser Leu Arg Val His Gly Pro Tyr Trp Met His Phe
20 25 30

Cys Gly Gly Ser Leu Ile His Pro Gln Trp Val Leu Thr Ala Ala His
35 40 45

Cys Val Gly Pro Asp Val Lys Asp Leu Ala Ala Leu Arg Val Gln Leu
50 55 60

Arg Glu Gln His Leu Tyr Tyr Gln Asp Gln Leu Leu Pro Val Ser Arg
65 70 75 80

Ile Ile Val His Pro Gln Phe Tyr Thr Ala Gln Ile Gly Ala Asp Ile
85 90 95

Ala Leu Leu Glu Leu Glu Glu Pro Val Lys Val Ser Ser His Val His
100 105 110

Thr Val Thr Leu Pro Pro Ala Ser Glu Thr Phe Pro Pro Gly Met Pro
115 120 125

Cys Trp Val Thr Gly Trp Gly Asp Val Asp Asn Asp Glu Arg Leu Pro
130 135 140

Pro Pro Phe Pro Leu Lys Gln Val Lys Val Pro Ile Met Glu Asn His
145 150 155 160

Ile Cys Asp Ala Lys Tyr His Leu Gly Ala Tyr Thr Gly Asp Asp Val
165 170 175

Arg Ile Val Arg Asp Asp Met Leu Cys Ala Gly Asn Thr Arg Arg Asp
180 185 190

Ser Cys Gln Gly Asp Ser Gly Gly Pro Leu Val Cys Lys Val Asn Gly
195 200 205

Thr Trp Leu Gln Ala Gly Val Val Ser Trp Gly Glu Gly Cys Ala Gln
210 215 220

Pro Asn Arg Pro Gly Ile Tyr Thr Arg Val Thr Tyr Tyr Leu Asp Trp
225 230 235 240

Ile His His Tyr Val Pro Lys Lys Pro
245

<210> 10
<211> 735
<212> DNA
<213> Homo sapiens

<220>
<221> CDS
<222> (1)..(735)

<400> 10
atc gtc ggg ggt cag gag gcc ccc agg agc aag tgg ccc tgg cag gtg 48
Ile Val Gly Gly Gln Glu Ala Pro Arg Ser Lys Trp Pro Trp Gln Val
1 5 10 15

agc ctg aga gtc cac ggc cca tac tgg atg cac ttc tgc ggg ggc tcc 96
Ser Leu Arg Val His Gly Pro Tyr Trp Met His Phe Cys Gly Gly Ser
20 25 30

ctc atc cac ccc cag tgg gtg ctg acc gca gcg cac tgc gtg gga ccg 144
Leu Ile His Pro Gln Trp Val Leu Thr Ala Ala His Cys Val Gly Pro
35 40 45

gac gtc aag gat ctg gcc gcc ctc agg gtg caa ctg cgg gag cag cac 192
Asp Val Lys Asp Leu Ala Ala Leu Arg Val Gln Leu Arg Glu Gln His
50 55 60

ctc tac tac cag gac cag ctg ctg ccg gtc agc agg atc atc gtg cac 240
Leu Tyr Tyr Gln Asp Gln Leu Leu Pro Val Ser Arg Ile Ile Val His
65 70 75 80

cca cag ttc tac acc gcc cag atc gga gcg gac atc gcc ctg ctg gag 288
Pro Gln Phe Tyr Thr Ala Gln Ile Gly Ala Asp Ile Ala Leu Leu Glu

600
500
400
300
200
100
0

	85	90	95	
ctg gag gag ccg gtg aag gtc tcc agc cac gtc cac acg gtc acc ctg				336
Leu Glu Glu Pro Val Lys Val Ser Ser His Val His Thr Val Thr Leu				
	100	105	110	
ccc cct gcc tca gag acc ttc ccc ccg ggg atg ccg tgc tgg gtc act				384
Pro Pro Ala Ser Glu Thr Phe Pro Pro Gly Met Pro Cys Trp Val Thr				
	115	120	125	
ggc tgg ggc gat gtg gac aat gat gag cgc ctc cca ccg cca ttt cct				432
Gly Trp Gly Asp Val Asp Asn Asp Glu Arg Leu Pro Pro Pro Phe Pro				
	130	135	140	
ctg aag cag gtg aag gtc ccc ata atg gaa aac cac att tgt gac gca				480
Leu Lys Gln Val Lys Val Pro Ile Met Glu Asn His Ile Cys Asp Ala				
	145	150	155	160
aaa tac cac ctt ggc gcc tac acg gga gac gac gtc cgc atc gtc cgt				528
Lys Tyr His Leu Gly Ala Tyr Thr Gly Asp Asp Val Arg Ile Val Arg				
	165	170	175	
gac gac atg ctg tgt gcc ggg aac acc cgg agg gac tca tgc cag ggc				576
Asp Asp Met Leu Cys Ala Gly Asn Thr Arg Arg Asp Ser Cys Gln Gly				
	180	185	190	
gac tcc gga ggg ccc ctg gtg tgc aag gtg aat ggc acc tgg ctg cag				624
Asp Ser Gly Gly Pro Leu Val Cys Lys Val Asn Gly Thr Trp Leu Gln				
	195	200	205	
gcg ggc gtg gtc agc tgg ggc gag ggc tgt gcc cag ccc aac cgg cct				672
Ala Gly Val Val Ser Trp Gly Glu Gly Cys Ala Gln Pro Asn Arg Pro				
	210	215	220	
ggc atc tac acc cgt gtc acc tac tac ttg gac tgg atc cac cac tat				720
Gly Ile Tyr Thr Arg Val Thr Tyr Tyr Leu Asp Trp Ile His His Tyr				
	225	230	235	240
gtc ccc aaa aag ccg				735
Val Pro Lys Lys Pro				
	245			

<210> 11
 <211> 245
 <212> PRT
 <213> Homo sapiens

<400> 11

Ile Val Gly Gly Gln Glu Ala Pro Arg Ser Lys Trp Pro Trp Gln Val
1 5 10 15

Ser Leu Arg Val His Gly Pro Tyr Trp Met His Phe Cys Gly Gly Ser
20 25 30

Leu Ile His Pro Gln Trp Val Leu Thr Ala Ala His Cys Val Gly Pro
35 40 45

Asp Val Lys Asp Leu Ala Ala Leu Arg Val Gln Leu Arg Glu Gln His
50 55 60

Leu Tyr Tyr Gln Asp Gln Leu Leu Pro Val Ser Arg Ile Ile Val His
65 70 75 80

Pro Gln Phe Tyr Thr Ala Gln Ile Gly Ala Asp Ile Ala Leu Leu Glu
85 90 95

Leu Glu Glu Pro Val Lys Val Ser Ser His Val His Thr Val Thr Leu
100 105 110

Pro Pro Ala Ser Glu Thr Phe Pro Pro Gly Met Pro Cys Trp Val Thr
115 120 125

Gly Trp Gly Asp Val Asp Asn Asp Glu Arg Leu Pro Pro Pro Phe Pro
130 135 140

Leu Lys Gln Val Lys Val Pro Ile Met Glu Asn His Ile Cys Asp Ala
145 150 155 160

Lys Tyr His Leu Gly Ala Tyr Thr Gly Asp Asp Val Arg Ile Val Arg
165 170 175

Asp Asp Met Leu Cys Ala Gly Asn Thr Arg Arg Asp Ser Cys Gln Gly
180 185 190

Asp Ser Gly Gly Pro Leu Val Cys Lys Val Asn Gly Thr Trp Leu Gln
195 200 205

Ala Gly Val Val Ser Trp Gly Glu Gly Cys Ala Gln Pro Asn Arg Pro
210 215 220

Gly Ile Tyr Thr Arg Val Thr Tyr Tyr Leu Asp Trp Ile His His Tyr
225 230 235 240

Val Pro Lys Lys Pro
245

<210> 12
<211> 33
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence:Mutagenesis
Oligo

<400> 12
gtgctgaccg ccgcggcgtg cgtgggaccg gac 33

<210> 13
<211> 33
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence:Mutagenesis
Oligo

<400> 13
gtccggtccc acgcacgccg cggcggtcag cac 33

<210> 14
<211> 33
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence:Mutagenesis
Oligo

<400> 14
gccagatcg gagcggcaat cgccctgctg gag 33

<210> 15
<211> 33
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence:Mutagenesis

Oligo

<400> 15
ctccagcagg gcgattgccg ctccgatctg ggc 33

<210> 16
<211> 30
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence:Mutagenesis
Oligo

<400> 16
tgtcaaggcg acgccggcgg acctctggtg 30

<210> 17
<211> 30
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence:Mutagenesis
Oligo

<400> 17
caccagaggt ccgccggcgt cgccttgaca 30

<210> 18
<211> 28
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence:Mutagenesis
Oligo

<400> 18
caaggagacg ccggcggacc actggtgt 28

<210> 19
<211> 36
<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence:Mutagenesis
Oligo

<400> 19

gcacaccagg ggcccgccgg cgtcgccctg gcatga 36

<210> 20

<211> 771

<212> DNA

<213> Homo sapiens

<220>

<221> CDS

<222> (7)..(753)

<400> 20

gggccc ctc gag aaa aga atc gtc ggg ggt cag gag gcc ccc agg agc 48
Leu Glu Lys Arg Ile Val Gly Gly Gln Glu Ala Pro Arg Ser
1 5 10

aag tgg ccc tgg cag gtg agc ctg aga gtc cac ggc cca tac tgg atg 96
Lys Trp Pro Trp Gln Val Ser Leu Arg Val His Gly Pro Tyr Trp Met
15 20 25 30

cac ttc tgc ggg ggc tcc ctc atc cac ccc cag tgg gtg ctg acc gcc 144
His Phe Cys Gly Gly Ser Leu Ile His Pro Gln Trp Val Leu Thr Ala
35 40 45

gcg gcg tgc gtg gga ccg gac gtc aag gat ctg gcc gcc ctc agg gtg 192
Ala Ala Cys Val Gly Pro Asp Val Lys Asp Leu Ala Ala Leu Arg Val
50 55 60

caa ctg cgg gag cag cac ctc tac tac cag gac cag ctg ctg ccg gtc 240
Gln Leu Arg Glu Gln His Leu Tyr Tyr Gln Asp Gln Leu Leu Pro Val
65 70 75

agc agg atc atc gtg cac cca cag ttc tac acc gcc cag atc gga gcg 288
Ser Arg Ile Ile Val His Pro Gln Phe Tyr Thr Ala Gln Ile Gly Ala
80 85 90

gac atc gcc ctg ctg gag ctg gag gag ccg gtg aag gtc tcc agc cac 336
Asp Ile Ala Leu Leu Glu Leu Glu Glu Pro Val Lys Val Ser Ser His
95 100 105 110

gtc cac acg gtc acc ctg ccc cct gcc tca gag acc ttc ccc ccg ggg 384
 Val His Thr Val Thr Leu Pro Pro Ala Ser Glu Thr Phe Pro Pro Gly
 115 120 125

atg ccg tgc tgg gtc act ggc tgg ggc gat gtg gac aat gat gag cgc 432
 Met Pro Cys Trp Val Thr Gly Trp Gly Asp Val Asp Asn Asp Glu Arg
 130 135 140

ctc cca ccg cca ttt cct ctg aag cag gtg aag gtc ccc ata atg gaa 480
 Leu Pro Pro Pro Phe Pro Leu Lys Gln Val Lys Val Pro Ile Met Glu
 145 150 155

aac cac att tgt gac gca aaa tac cac ctt ggc gcc tac acg gga gac 528
 Asn His Ile Cys Asp Ala Lys Tyr His Leu Gly Ala Tyr Thr Gly Asp
 160 165 170

gac gtc cgc atc gtc cgt gac gac atg ctg tgt gcc ggg aac acc cgg 576
 Asp Val Arg Ile Val Arg Asp Asp Met Leu Cys Ala Gly Asn Thr Arg
 175 180 185 190

agg gac tca tgc cag ggc gac tcc gga ggg ccc ctg gtg tgc aag gtg 624
 Arg Asp Ser Cys Gln Gly Asp Ser Gly Gly Pro Leu Val Cys Lys Val
 195 200 205

aat ggc acc tgg ctg cag gcg ggc gtg gtc agc tgg ggc gag ggc tgt 672
 Asn Gly Thr Trp Leu Gln Ala Gly Val Val Ser Trp Gly Glu Gly Cys
 210 215 220

gcc cag ccc aac cgg cct ggc atc tac acc cgt gtc acc tac tac ttg 720
 Ala Gln Pro Asn Arg Pro Gly Ile Tyr Thr Arg Val Thr Tyr Tyr Leu
 225 230 235

gac tgg atc cac cac tat gtc ccc aaa aag ccg tgaagcggcc gccgtcgt 771
 Asp Trp Ile His His Tyr Val Pro Lys Lys Pro
 240 245

<210> 21

<211> 249

<212> PRT

<213> Homo sapiens

<400> 21

Leu Glu Lys Arg Ile Val Gly Gly Gln Glu Ala Pro Arg Ser Lys Trp
 1 5 10 15

Pro Trp Gln Val Ser Leu Arg Val His Gly Pro Tyr Trp Met His Phe
 20 25 30

Cys Gly Gly Ser Leu Ile His Pro Gln Trp Val Leu Thr Ala Ala Ala
35 40 45

Cys Val Gly Pro Asp Val Lys Asp Leu Ala Ala Leu Arg Val Gln Leu
50 55 60

Arg Glu Gln His Leu Tyr Tyr Gln Asp Gln Leu Leu Pro Val Ser Arg
65 70 75 80

Ile Ile Val His Pro Gln Phe Tyr Thr Ala Gln Ile Gly Ala Asp Ile
85 90 95

Ala Leu Leu Glu Leu Glu Glu Pro Val Lys Val Ser Ser His Val His
100 105 110

Thr Val Thr Leu Pro Pro Ala Ser Glu Thr Phe Pro Pro Gly Met Pro
115 120 125

Cys Trp Val Thr Gly Trp Gly Asp Val Asp Asn Asp Glu Arg Leu Pro
130 135 140

Pro Pro Phe Pro Leu Lys Gln Val Lys Val Pro Ile Met Glu Asn His
145 150 155 160

Ile Cys Asp Ala Lys Tyr His Leu Gly Ala Tyr Thr Gly Asp Asp Val
165 170 175

Arg Ile Val Arg Asp Asp Met Leu Cys Ala Gly Asn Thr Arg Arg Asp
180 185 190

Ser Cys Gln Gly Asp Ser Gly Gly Pro Leu Val Cys Lys Val Asn Gly
195 200 205

Thr Trp Leu Gln Ala Gly Val Val Ser Trp Gly Glu Gly Cys Ala Gln
210 215 220

Pro Asn Arg Pro Gly Ile Tyr Thr Arg Val Thr Tyr Tyr Leu Asp Trp
225 230 235 240

Ile His His Tyr Val Pro Lys Lys Pro
245

<210> 22

<211> 771

<212> DNA

<213> Homo sapiens

<220>

<221> CDS

<222> (7)..(753)

<400> 22

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gggccc ctc gag aaa aga atc gtc ggg ggt cag gag gcc ccc agg agc      48
      Leu Glu Lys Arg Ile Val Gly Gly Gln Glu Ala Pro Arg Ser
          1              5              10

aag tgg ccc tgg cag gtg agc ctg aga gtc cac ggc cca tac tgg atg      96
Lys Trp Pro Trp Gln Val Ser Leu Arg Val His Gly Pro Tyr Trp Met
  15              20              25              30

cac ttc tgc ggg ggc tcc ctc atc cac ccc cag tgg gtg ctg acc gca      144
His Phe Cys Gly Gly Ser Leu Ile His Pro Gln Trp Val Leu Thr Ala
          35              40              45

gcg cac tgc gtg gga ccg gac gtc aag gat ctg gcc gcc ctc agg gtg      192
Ala His Cys Val Gly Pro Asp Val Lys Asp Leu Ala Ala Leu Arg Val
          50              55              60

caa ctg cgg gag cag cac ctc tac tac cag gac cag ctg ctg ccg gtc      240
Gln Leu Arg Glu Gln His Leu Tyr Tyr Gln Asp Gln Leu Leu Pro Val
          65              70              75

agc agg atc atc gtg cac cca cag ttc tac acc gcc cag atc gga gcg      288
Ser Arg Ile Ile Val His Pro Gln Phe Tyr Thr Ala Gln Ile Gly Ala
          80              85              90

gca atc gcc ctg ctg gag ctg gag gag ccg gtg aag gtc tcc agc cac      336
Ala Ile Ala Leu Leu Glu Leu Glu Glu Pro Val Lys Val Ser Ser His
          95              100              105              110

gtc cac acg gtc acc ctg ccc cct gcc tca gag acc ttc ccc ccg ggg      384
Val His Thr Val Thr Leu Pro Pro Ala Ser Glu Thr Phe Pro Pro Gly
          115              120              125

atg ccg tgc tgg gtc act ggc tgg ggc gat gtg gac aat gat gag cgc      432
Met Pro Cys Trp Val Thr Gly Trp Gly Asp Val Asp Asn Asp Glu Arg
          130              135              140

ctc cca ccg cca ttt cct ctg aag cag gtg aag gtc ccc ata atg gaa      480
Leu Pro Pro Pro Phe Pro Leu Lys Gln Val Lys Val Pro Ile Met Glu
          145              150              155

aac cac att tgt gac gca aaa tac cac ctt ggc gcc tac acg gga gac      528
Asn His Ile Cys Asp Ala Lys Tyr His Leu Gly Ala Tyr Thr Gly Asp
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160	165	170	
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Asp Val Arg Ile Val Arg Asp Asp Met Leu Cys Ala Gly Asn Thr Arg			
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agg gac tca tgc cag ggc gac tcc gga ggg ccc ctg gtg tgc aag gtg			624
Arg Asp Ser Cys Gln Gly Asp Ser Gly Gly Pro Leu Val Cys Lys Val			
	195	200	205
aat ggc acc tgg ctg cag gcg ggc gtg gtc agc tgg ggc gag ggc tgt			672
Asn Gly Thr Trp Leu Gln Ala Gly Val Val Ser Trp Gly Glu Gly Cys			
	210	215	220
gcc cag ccc aac cgg cct ggc atc tac acc cgt gtc acc tac tac ttg			720
Ala Gln Pro Asn Arg Pro Gly Ile Tyr Thr Arg Val Thr Tyr Tyr Leu			
	225	230	235
gac tgg atc cac cac tat gtc ccc aaa aag ccg tgaagcggcc gccgtcgt			771
Asp Trp Ile His His Tyr Val Pro Lys Lys Pro			
	240	245	
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Pro Trp Gln Val Ser Leu Arg Val His Gly Pro Tyr Trp Met His Phe			
	20	25	30
Cys Gly Gly Ser Leu Ile His Pro Gln Trp Val Leu Thr Ala Ala His			
	35	40	45
Cys Val Gly Pro Asp Val Lys Asp Leu Ala Ala Leu Arg Val Gln Leu			
	50	55	60
Arg Glu Gln His Leu Tyr Tyr Gln Asp Gln Leu Leu Pro Val Ser Arg			
	65	70	75
Ile Ile Val His Pro Gln Phe Tyr Thr Ala Gln Ile Gly Ala Ala Ile			
	85	90	95
Ala Leu Leu Glu Leu Glu Glu Pro Val Lys Val Ser Ser His Val His			

100		105		110
Thr Val Thr Leu Pro Pro Ala Ser Glu Thr Phe Pro Pro Gly Met Pro				
115		120		125
Cys Trp Val Thr Gly Trp Gly Asp Val Asp Asn Asp Glu Arg Leu Pro				
130		135		140
Pro Pro Phe Pro Leu Lys Gln Val Lys Val Pro Ile Met Glu Asn His				
145		150		155
Ile Cys Asp Ala Lys Tyr His Leu Gly Ala Tyr Thr Gly Asp Asp Val				
	165		170	175
Arg Ile Val Arg Asp Asp Met Leu Cys Ala Gly Asn Thr Arg Arg Asp				
	180		185	190
Ser Cys Gln Gly Asp Ser Gly Gly Pro Leu Val Cys Lys Val Asn Gly				
	195		200	205
Thr Trp Leu Gln Ala Gly Val Val Ser Trp Gly Glu Gly Cys Ala Gln				
	210		215	220
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Ile His His Tyr Val Pro Lys Lys Pro				
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 Lys Trp Pro Trp Gln Val Ser Leu Arg Val His Gly Pro Tyr Trp Met
 15 20 25 30

cac ttc tgc ggg ggc tcc ctc atc cac ccc cag tgg gtg ctg acc gca 144
His Phe Cys Gly Gly Ser Leu Ile His Pro Gln Trp Val Leu Thr Ala
35 40 45

gcg cac tgc gtg gga ccg gac gtc aag gat ctg gcc gcc ctc agg gtg 192
Ala His Cys Val Gly Pro Asp Val Lys Asp Leu Ala Ala Leu Arg Val
50 55 60

caa ctg cgg gag cag cac ctc tac tac cag gac cag ctg ctg ccg gtc 240
Gln Leu Arg Glu Gln His Leu Tyr Tyr Gln Asp Gln Leu Leu Pro Val
65 70 75

agc agg atc atc gtg cac cca cag ttc tac acc gcc cag atc gga gcg 288
Ser Arg Ile Ile Val His Pro Gln Phe Tyr Thr Ala Gln Ile Gly Ala
80 85 90

gac atc gcc ctg ctg gag ctg gag gag ccg gtg aag gtc tcc agc cac 336
Asp Ile Ala Leu Leu Glu Leu Glu Glu Pro Val Lys Val Ser Ser His
95 100 105 110

gtc cac acg gtc acc ctg ccc cct gcc tca gag acc ttc ccc ccg ggg 384
Val His Thr Val Thr Leu Pro Pro Ala Ser Glu Thr Phe Pro Pro Gly
115 120 125

atg ccg tgc tgg gtc act ggc tgg ggc gat gtg gac aat gat gag cgc 432
Met Pro Cys Trp Val Thr Gly Trp Gly Asp Val Asp Asn Asp Glu Arg
130 135 140

ctc cca ccg cca ttt cct ctg aag cag gtg aag gtc ccc ata atg gaa 480
Leu Pro Pro Pro Phe Pro Leu Lys Gln Val Lys Val Pro Ile Met Glu
145 150 155

aac cac att tgt gac gca aaa tac cac ctt ggc gcc tac acg gga gac 528
Asn His Ile Cys Asp Ala Lys Tyr His Leu Gly Ala Tyr Thr Gly Asp
160 165 170

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Asp Val Arg Ile Val Arg Asp Asp Met Leu Cys Ala Gly Asn Thr Arg
175 180 185 190

agg gac tca tgt caa ggc gac gcc ggc gga cct ctg gtg tgc aag gtg 624
Arg Asp Ser Cys Gln Gly Asp Ala Gly Gly Pro Leu Val Cys Lys Val
195 200 205

aat ggc acc tgg ctg cag gcg ggc gtg gtc agc tgg ggc gag ggc tgt 672
Asn Gly Thr Trp Leu Gln Ala Gly Val Val Ser Trp Gly Glu Gly Cys
210 215 220

gcc cag ccc aac cgg cct ggc atc tac acc cgt gtc acc tac tac ttg 720
Ala Gln Pro Asn Arg Pro Gly Ile Tyr Thr Arg Val Thr Tyr Tyr Leu
225 230 235

gac tgg atc cac cac tat gtc ccc aaa aag ccg tgaagcggcc gccgtcgt 771
Asp Trp Ile His His Tyr Val Pro Lys Lys Pro
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<211> 249

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<213> Homo sapiens

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Pro Trp Gln Val Ser Leu Arg Val His Gly Pro Tyr Trp Met His Phe
20 25 30

Cys Gly Gly Ser Leu Ile His Pro Gln Trp Val Leu Thr Ala Ala His
35 40 45

Cys Val Gly Pro Asp Val Lys Asp Leu Ala Ala Leu Arg Val Gln Leu
50 55 60

Arg Glu Gln His Leu Tyr Tyr Gln Asp Gln Leu Leu Pro Val Ser Arg
65 70 75 80

Ile Ile Val His Pro Gln Phe Tyr Thr Ala Gln Ile Gly Ala Asp Ile
85 90 95

Ala Leu Leu Glu Leu Glu Glu Pro Val Lys Val Ser Ser His Val His
100 105 110

Thr Val Thr Leu Pro Pro Ala Ser Glu Thr Phe Pro Pro Gly Met Pro
115 120 125

Cys Trp Val Thr Gly Trp Gly Asp Val Asp Asn Asp Glu Arg Leu Pro
130 135 140

Pro Pro Phe Pro Leu Lys Gln Val Lys Val Pro Ile Met Glu Asn His
145 150 155 160

Ile Cys Asp Ala Lys Tyr His Leu Gly Ala Tyr Thr Gly Asp Asp Val
165 170 175

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Arg Ile Val Arg Asp Asp Met Leu Cys Ala Gly Asn Thr Arg Arg Asp
180 185 190

Ser Cys Gln Gly Asp Ala Gly Gly Pro Leu Val Cys Lys Val Asn Gly
195 200 205

Thr Trp Leu Gln Ala Gly Val Val Ser Trp Gly Glu Gly Cys Ala Gln
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Pro Asn Arg Pro Gly Ile Tyr Thr Arg Val Thr Tyr Tyr Leu Asp Trp
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Ile His His Tyr Val Pro Lys Lys Pro
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Lys Trp Pro Trp Gln Val Ser Leu Arg Val His Gly Pro Tyr Trp Met
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His Phe Cys Gly Gly Ser Leu Ile His Pro Gln Trp Val Leu Thr Ala
35 40 45

gcg cac tgc gtg gga ccg gac gtc aag gat ctg gcc gcc ctc agg gtg 192
Ala His Cys Val Gly Pro Asp Val Lys Asp Leu Ala Ala Leu Arg Val
50 55 60

caa ctg cgg gag cag cac ctc tac tac cag gac cag ctg ctg ccg gtc 240
Gln Leu Arg Glu Gln His Leu Tyr Tyr Gln Asp Gln Leu Leu Pro Val
65 70 75

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Ser Arg Ile Ile Val His Pro Gln Phe Tyr Thr Ala Gln Ile Gly Ala

80	85	90	
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Asp Ile Ala Leu Leu Glu Leu Glu Glu Pro Val Lys Val Ser Ser His			
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gtc cac acg gtc acc ctg ccc cct gcc tca gag acc ttc ccc ccg ggg			384
Val His Thr Val Thr Leu Pro Pro Ala Ser Glu Thr Phe Pro Pro Gly			
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atg ccg tgc tgg gtc act ggc tgg ggc gat gtg gac aat gat gag cgc			432
Met Pro Cys Trp Val Thr Gly Trp Gly Asp Val Asp Asn Asp Glu Arg			
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ctc cca ccg cca ttt cct ctg aag cag gtg aag gtc ccc ata atg gaa			480
Leu Pro Pro Pro Phe Pro Leu Lys Gln Val Lys Val Pro Ile Met Glu			
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aac cac att tgt gac gca aaa tac cac ctt ggc gcc tac acg gga gac			528
Asn His Ile Cys Asp Ala Lys Tyr His Leu Gly Ala Tyr Thr Gly Asp			
160	165	170	
gac gtc cgc atc gtc cgt gac gac atg ctg tgt gcc ggg aac acc cgg			576
Asp Val Arg Ile Val Arg Asp Asp Met Leu Cys Ala Gly Asn Thr Arg			
175	180	185	190
agg gac tca tgc caa gga gac gcc ggc gga cca ctg gtg tgc aag gtg			624
Arg Asp Ser Cys Gln Gly Asp Ala Gly Gly Pro Leu Val Cys Lys Val			
195	200	205	
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Asn Gly Thr Trp Leu Gln Ala Gly Val Val Ser Trp Gly Glu Gly Cys			
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Ala Gln Pro Asn Arg Pro Gly Ile Tyr Thr Arg Val Thr Tyr Tyr Leu			
225	230	235	
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Asp Trp Ile His His Tyr Val Pro Lys Lys Pro			
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Cys Gly Gly Ser Leu Ile His Pro Gln Trp Val Leu Thr Ala Ala His
35 40 45

Cys Val Gly Pro Asp Val Lys Asp Leu Ala Ala Leu Arg Val Gln Leu
50 55 60

Arg Glu Gln His Leu Tyr Tyr Gln Asp Gln Leu Leu Pro Val Ser Arg
65 70 75 80

Ile Ile Val His Pro Gln Phe Tyr Thr Ala Gln Ile Gly Ala Asp Ile
85 90 95

Ala Leu Leu Glu Leu Glu Glu Pro Val Lys Val Ser Ser His Val His
100 105 110

Thr Val Thr Leu Pro Pro Ala Ser Glu Thr Phe Pro Pro Gly Met Pro
115 120 125

Cys Trp Val Thr Gly Trp Gly Asp Val Asp Asn Asp Glu Arg Leu Pro
130 135 140

Pro Pro Phe Pro Leu Lys Gln Val Lys Val Pro Ile Met Glu Asn His
145 150 155 160

Ile Cys Asp Ala Lys Tyr His Leu Gly Ala Tyr Thr Gly Asp Asp Val
165 170 175

Arg Ile Val Arg Asp Asp Met Leu Cys Ala Gly Asn Thr Arg Arg Asp
180 185 190

Ser Cys Gln Gly Asp Ala Gly Gly Pro Leu Val Cys Lys Val Asn Gly
195 200 205

Thr Trp Leu Gln Ala Gly Val Val Ser Trp Gly Glu Gly Cys Ala Gln
210 215 220

Pro Asn Arg Pro Gly Ile Tyr Thr Arg Val Thr Tyr Tyr Leu Asp Trp
225 230 235 240

Ile His His Tyr Val Pro Lys Lys Pro
245

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 Ser Leu Arg Val His Gly Pro Tyr Trp Met His Phe Cys Gly Gly Ser
 20 25 30
 ctc atc cac ccc cag tgg gtg ctg acc gcc gcg gcg tgc gtg gga ccg 144
 Leu Ile His Pro Gln Trp Val Leu Thr Ala Ala Ala Cys Val Gly Pro
 35 40 45
 gac gtc aag gat ctg gcc gcc ctc agg gtg caa ctg cgg gag cag cac 192
 Asp Val Lys Asp Leu Ala Ala Leu Arg Val Gln Leu Arg Glu Gln His
 50 55 60
 ctc tac tac cag gac cag ctg ctg ccg gtc agc agg atc atc gtg cac 240
 Leu Tyr Tyr Gln Asp Gln Leu Leu Pro Val Ser Arg Ile Ile Val His
 65 70 75 80
 cca cag ttc tac acc gcc cag atc gga gcg gac atc gcc ctg ctg gag 288
 Pro Gln Phe Tyr Thr Ala Gln Ile Gly Ala Asp Ile Ala Leu Leu Glu
 85 90 95
 ctg gag gag ccg gtg aag gtc tcc agc cac gtc cac acg gtc acc ctg 336
 Leu Glu Glu Pro Val Lys Val Ser Ser His Val His Thr Val Thr Leu
 100 105 110
 ccc cct gcc tca gag acc ttc ccc ccg ggg atg ccg tgc tgg gtc act 384
 Pro Pro Ala Ser Glu Thr Phe Pro Pro Gly Met Pro Cys Trp Val Thr
 115 120 125
 ggc tgg ggc gat gtg gac aat gat gag cgc ctc cca ccg cca ttt cct 432
 Gly Trp Gly Asp Val Asp Asn Asp Glu Arg Leu Pro Pro Pro Phe Pro
 130 135 140

ctg aag cag gtg aag gtc ccc ata atg gaa aac cac att tgt gac gca 480
 Leu Lys Gln Val Lys Val Pro Ile Met Glu Asn His Ile Cys Asp Ala
 145 150 155 160

aaa tac cac ctt ggc gcc tac acg gga gac gac gtc cgc atc gtc cgt 528
 Lys Tyr His Leu Gly Ala Tyr Thr Gly Asp Asp Val Arg Ile Val Arg
 165 170 175

gac gac atg ctg tgt gcc ggg aac acc cgg agg gac tca tgc cag ggc 576
 Asp Asp Met Leu Cys Ala Gly Asn Thr Arg Arg Asp Ser Cys Gln Gly
 180 185 190

gac tcc gga ggg ccc ctg gtg tgc aag gtg aat ggc acc tgg ctg cag 624
 Asp Ser Gly Gly Pro Leu Val Cys Lys Val Asn Gly Thr Trp Leu Gln
 195 200 205

gcg ggc gtg gtc agc tgg ggc gag ggc tgt gcc cag ccc aac cgg cct 672
 Ala Gly Val Val Ser Trp Gly Glu Gly Cys Ala Gln Pro Asn Arg Pro
 210 215 220

ggc atc tac acc cgt gtc acc tac tac ttg gac tgg atc cac cac tat 720
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gtc ccc aaa aag ccg 735
 Val Pro Lys Lys Pro
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 35 40 45

Asp Val Lys Asp Leu Ala Ala Leu Arg Val Gln Leu Arg Glu Gln His
 50 55 60

Leu Tyr Tyr Gln Asp Gln Leu Leu Pro Val Ser Arg Ile Ile Val His

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Ser Leu Arg Val His Gly Pro Tyr Trp Met His Phe Cys Gly Gly Ser				
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ctc atc cac ccc cag tgg gtg ctg acc gca gcg cac tgc gtg gga ccg				144
Leu Ile His Pro Gln Trp Val Leu Thr Ala Ala His Cys Val Gly Pro				
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gac gtc aag gat ctg gcc gcc ctc agg gtg caa ctg cgg gag cag cac				192
Asp Val Lys Asp Leu Ala Ala Leu Arg Val Gln Leu Arg Glu Gln His				
	50	55	60	
ctc tac tac cag gac cag ctg ctg ccg gtc agc agg atc atc gtg cac				240
Leu Tyr Tyr Gln Asp Gln Leu Leu Pro Val Ser Arg Ile Ile Val His				
	65	70	75	80
cca cag ttc tac acc gcc cag atc gga gcg gca atc gcc ctg ctg gag				288
Pro Gln Phe Tyr Thr Ala Gln Ile Gly Ala Ala Ile Ala Leu Leu Glu				
	85	90	95	
ctg gag gag ccg gtg aag gtc tcc agc cac gtc cac acg gtc acc ctg				336
Leu Glu Glu Pro Val Lys Val Ser Ser His Val His Thr Val Thr Leu				
	100	105	110	
ccc cct gcc tca gag acc ttc ccc ccg ggg atg ccg tgc tgg gtc act				384
Pro Pro Ala Ser Glu Thr Phe Pro Pro Gly Met Pro Cys Trp Val Thr				
	115	120	125	
ggc tgg ggc gat gtg gac aat gat gag cgc ctc cca ccg cca ttt cct				432
Gly Trp Gly Asp Val Asp Asn Asp Glu Arg Leu Pro Pro Pro Phe Pro				
	130	135	140	
ctg aag cag gtg aag gtc ccc ata atg gaa aac cac att tgt gac gca				480
Leu Lys Gln Val Lys Val Pro Ile Met Glu Asn His Ile Cys Asp Ala				
	145	150	155	160
aaa tac cac ctt ggc gcc tac acg gga gac gac gtc cgc atc gtc cgt				528
Lys Tyr His Leu Gly Ala Tyr Thr Gly Asp Asp Val Arg Ile Val Arg				
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Asp Asp Met Leu Cys Ala Gly Asn Thr Arg Arg Asp Ser Cys Gln Gly				
	180	185	190	
gac tcc gga ggg ccc ctg gtg tgc aag gtg aat ggc acc tgg ctg cag				624
Asp Ser Gly Gly Pro Leu Val Cys Lys Val Asn Gly Thr Trp Leu Gln				

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gcg ggc gtg gtc agc tgg ggc gag ggc tgt gcc cag ccc aac cgg cct			672
Ala Gly Val Val Ser Trp Gly Glu Gly Cys Ala Gln Pro Asn Arg Pro			
210	215	220	
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Gly Ile Tyr Thr Arg Val Thr Tyr Tyr Leu Asp Trp Ile His His Tyr			
225	230	235	240
gtc ccc aaa aag ccg			735
Val Pro Lys Lys Pro			
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Leu Ile His Pro Gln Trp Val Leu Thr Ala Ala His Cys Val Gly Pro			
35	40	45	
Asp Val Lys Asp Leu Ala Ala Leu Arg Val Gln Leu Arg Glu Gln His			
50	55	60	
Leu Tyr Tyr Gln Asp Gln Leu Leu Pro Val Ser Arg Ile Ile Val His			
65	70	75	80
Pro Gln Phe Tyr Thr Ala Gln Ile Gly Ala Ala Ile Ala Leu Leu Glu			
85	90	95	
Leu Glu Glu Pro Val Lys Val Ser Ser His Val His Thr Val Thr Leu			
100	105	110	
Pro Pro Ala Ser Glu Thr Phe Pro Pro Gly Met Pro Cys Trp Val Thr			
115	120	125	
Gly Trp Gly Asp Val Asp Asn Asp Glu Arg Leu Pro Pro Pro Phe Pro			
130	135	140	

Leu Lys Gln Val Lys Val Pro Ile Met Glu Asn His Ile Cys Asp Ala
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 Lys Tyr His Leu Gly Ala Tyr Thr Gly Asp Asp Val Arg Ile Val Arg
 165 170 175
 Asp Asp Met Leu Cys Ala Gly Asn Thr Arg Arg Asp Ser Cys Gln Gly
 180 185 190
 Asp Ser Gly Gly Pro Leu Val Cys Lys Val Asn Gly Thr Trp Leu Gln
 195 200 205
 Ala Gly Val Val Ser Trp Gly Glu Gly Cys Ala Gln Pro Asn Arg Pro
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 Gly Ile Tyr Thr Arg Val Thr Tyr Tyr Leu Asp Trp Ile His His Tyr
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 Val Pro Lys Lys Pro
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 Ser Leu Arg Val His Gly Pro Tyr Trp Met His Phe Cys Gly Gly Ser
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 ctc atc cac ccc cag tgg gtg ctg acc gca gcg cac tgc gtg gga ccg 144
 Leu Ile His Pro Gln Trp Val Leu Thr Ala Ala His Cys Val Gly Pro
 35 40 45
 gac gtc aag gat ctg gcc gcc ctc agg gtg caa ctg cgg gag cag cac 192
 Asp Val Lys Asp Leu Ala Ala Leu Arg Val Gln Leu Arg Glu Gln His
 50 55 60

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Leu Tyr Tyr Gln Asp Gln Leu Leu Pro Val Ser Arg Ile Ile Val His	
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cca cag ttc tac acc gcc cag atc gga gcg gac atc gcc ctg ctg gag	288
Pro Gln Phe Tyr Thr Ala Gln Ile Gly Ala Asp Ile Ala Leu Leu Glu	
85 90 95	
ctg gag gag ccg gtg aag gtc tcc agc cac gtc cac acg gtc acc ctg	336
Leu Glu Glu Pro Val Lys Val Ser Ser His Val His Thr Val Thr Leu	
100 105 110	
ccc cct gcc tca gag acc ttc ccc ccg ggg atg ccg tgc tgg gtc act	384
Pro Pro Ala Ser Glu Thr Phe Pro Pro Gly Met Pro Cys Trp Val Thr	
115 120 125	
ggc tgg ggc gat gtg gac aat gat gag cgc ctc cca ccg cca ttt cct	432
Gly Trp Gly Asp Val Asp Asn Asp Glu Arg Leu Pro Pro Pro Phe Pro	
130 135 140	
ctg aag cag gtg aag gtc ccc ata atg gaa aac cac att tgt gac gca	480
Leu Lys Gln Val Lys Val Pro Ile Met Glu Asn His Ile Cys Asp Ala	
145 150 155 160	
aaa tac cac ctt ggc gcc tac acg gga gac gac gtc cgc atc gtc cgt	528
Lys Tyr His Leu Gly Ala Tyr Thr Gly Asp Asp Val Arg Ile Val Arg	
165 170 175	
gac gac atg ctg tgt gcc ggg aac acc cgg agg gac tca tgt caa ggc	576
Asp Asp Met Leu Cys Ala Gly Asn Thr Arg Arg Asp Ser Cys Gln Gly	
180 185 190	
gac gcc ggc gga cct ctg gtg tgc aag gtg aat ggc acc tgg ctg cag	624
Asp Ala Gly Gly Pro Leu Val Cys Lys Val Asn Gly Thr Trp Leu Gln	
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gcg ggc gtg gtc agc tgg ggc gag ggc tgt gcc cag ccc aac cgg cct	672
Ala Gly Val Val Ser Trp Gly Glu Gly Cys Ala Gln Pro Asn Arg Pro	
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Val Pro Lys Lys Pro	
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 <213> Homo sapiens

<400> 33

Ile	Val	Gly	Gly	Gln	Glu	Ala	Pro	Arg	Ser	Lys	Trp	Pro	Trp	Gln	Val
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Ser	Leu	Arg	Val	His	Gly	Pro	Tyr	Trp	Met	His	Phe	Cys	Gly	Gly	Ser
			20					25					30		
Leu	Ile	His	Pro	Gln	Trp	Val	Leu	Thr	Ala	Ala	His	Cys	Val	Gly	Pro
		35					40					45			
Asp	Val	Lys	Asp	Leu	Ala	Ala	Leu	Arg	Val	Gln	Leu	Arg	Glu	Gln	His
	50					55					60				
Leu	Tyr	Tyr	Gln	Asp	Gln	Leu	Leu	Pro	Val	Ser	Arg	Ile	Ile	Val	His
65					70					75					80
Pro	Gln	Phe	Tyr	Thr	Ala	Gln	Ile	Gly	Ala	Asp	Ile	Ala	Leu	Leu	Glu
				85					90					95	
Leu	Glu	Glu	Pro	Val	Lys	Val	Ser	Ser	His	Val	His	Thr	Val	Thr	Leu
			100					105					110		
Pro	Pro	Ala	Ser	Glu	Thr	Phe	Pro	Pro	Gly	Met	Pro	Cys	Trp	Val	Thr
		115					120					125			
Gly	Trp	Gly	Asp	Val	Asp	Asn	Asp	Glu	Arg	Leu	Pro	Pro	Pro	Phe	Pro
	130					135					140				
Leu	Lys	Gln	Val	Lys	Val	Pro	Ile	Met	Glu	Asn	His	Ile	Cys	Asp	Ala
145					150					155					160
Lys	Tyr	His	Leu	Gly	Ala	Tyr	Thr	Gly	Asp	Asp	Val	Arg	Ile	Val	Arg
				165					170					175	
Asp	Asp	Met	Leu	Cys	Ala	Gly	Asn	Thr	Arg	Arg	Asp	Ser	Cys	Gln	Gly
			180					185					190		
Asp	Ala	Gly	Gly	Pro	Leu	Val	Cys	Lys	Val	Asn	Gly	Thr	Trp	Leu	Gln
		195					200					205			
Ala	Gly	Val	Val	Ser	Trp	Gly	Glu	Gly	Cys	Ala	Gln	Pro	Asn	Arg	Pro
	210					215					220				

Gly Ile Tyr Thr Arg Val Thr Tyr Tyr Leu Asp Trp Ile His His Tyr
 225 230 235 240

Val Pro Lys Lys Pro
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<210> 34
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 <212> DNA
 <213> Homo sapiens

<220>
 <221> CDS
 <222> (1)..(735)

<400> 34
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 Ser Leu Arg Val His Gly Pro Tyr Trp Met His Phe Cys Gly Gly Ser
 20 25 30
 ctc atc cac ccc cag tgg gtg ctg acc gca gcg cac tgc gtg gga ccg 144
 Leu Ile His Pro Gln Trp Val Leu Thr Ala Ala His Cys Val Gly Pro
 35 40 45
 gac gtc aag gat ctg gcc gcc ctc agg gtg caa ctg cgg gag cag cac 192
 Asp Val Lys Asp Leu Ala Ala Leu Arg Val Gln Leu Arg Glu Gln His
 50 55 60
 ctc tac tac cag gac cag ctg ctg ccg gtc agc agg atc atc gtg cac 240
 Leu Tyr Tyr Gln Asp Gln Leu Leu Pro Val Ser Arg Ile Ile Val His
 65 70 75 80
 cca cag ttc tac acc gcc cag atc gga gcg gac atc gcc ctg ctg gag 288
 Pro Gln Phe Tyr Thr Ala Gln Ile Gly Ala Asp Ile Ala Leu Leu Glu
 85 90 95
 ctg gag gag ccg gtg aag gtc tcc agc cac gtc cac acg gtc acc ctg 336
 Leu Glu Glu Pro Val Lys Val Ser Ser His Val His Thr Val Thr Leu
 100 105 110
 ccc cct gcc tca gag acc ttc ccc ccg ggg atg ccg tgc tgg gtc act 384
 Pro Pro Ala Ser Glu Thr Phe Pro Pro Gly Met Pro Cys Trp Val Thr

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115	120	125	
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Gly Trp Gly Asp Val Asp Asn Asp Glu Arg Leu Pro Pro Pro Phe Pro			
130	135	140	
ctg aag cag gtg aag gtc ccc ata atg gaa aac cac att tgt gac gca			480
Leu Lys Gln Val Lys Val Pro Ile Met Glu Asn His Ile Cys Asp Ala			
145	150	155	160
aaa tac cac ctt ggc gcc tac acg gga gac gac gtc cgc atc gtc cgt			528
Lys Tyr His Leu Gly Ala Tyr Thr Gly Asp Asp Val Arg Ile Val Arg			
165	170	175	
gac gac atg ctg tgt gcc ggg aac acc cgg agg gac tca tgc caa gga			576
Asp Asp Met Leu Cys Ala Gly Asn Thr Arg Arg Asp Ser Cys Gln Gly			
180	185	190	
gac gcc ggc gga cca ctg gtg tgc aag gtg aat ggc acc tgg ctg cag			624
Asp Ala Gly Gly Pro Leu Val Cys Lys Val Asn Gly Thr Trp Leu Gln			
195	200	205	
gcg ggc gtg gtc agc tgg ggc gag ggc tgt gcc cag ccc aac cgg cct			672
Ala Gly Val Val Ser Trp Gly Glu Gly Cys Ala Gln Pro Asn Arg Pro			
210	215	220	
ggc atc tac acc cgt gtc acc tac tac ttg gac tgg atc cac cac tat			720
Gly Ile Tyr Thr Arg Val Thr Tyr Tyr Leu Asp Trp Ile His His Tyr			
225	230	235	240
gtc ccc aaa aag ccg			735
Val Pro Lys Lys Pro			
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<210> 35
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<212> PRT
<213> Homo sapiens

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20 25 30
Leu Ile His Pro Gln Trp Val Leu Thr Ala Ala His Cys Val Gly Pro

35

40

45

Asp Val Lys Asp Leu Ala Ala Leu Arg Val Gln Leu Arg Glu Gln His
50 55 60

Leu Tyr Tyr Gln Asp Gln Leu Leu Pro Val Ser Arg Ile Ile Val His
65 70 75 80

Pro Gln Phe Tyr Thr Ala Gln Ile Gly Ala Asp Ile Ala Leu Leu Glu
85 90 95

Leu Glu Glu Pro Val Lys Val Ser Ser His Val His Thr Val Thr Leu
100 105 110

Pro Pro Ala Ser Glu Thr Phe Pro Pro Gly Met Pro Cys Trp Val Thr
115 120 125

Gly Trp Gly Asp Val Asp Asn Asp Glu Arg Leu Pro Pro Pro Phe Pro
130 135 140

Leu Lys Gln Val Lys Val Pro Ile Met Glu Asn His Ile Cys Asp Ala
145 150 155 160

Lys Tyr His Leu Gly Ala Tyr Thr Gly Asp Asp Val Arg Ile Val Arg
165 170 175

Asp Asp Met Leu Cys Ala Gly Asn Thr Arg Arg Asp Ser Cys Gln Gly
180 185 190

Asp Ala Gly Gly Pro Leu Val Cys Lys Val Asn Gly Thr Trp Leu Gln
195 200 205

Ala Gly Val Val Ser Trp Gly Glu Gly Cys Ala Gln Pro Asn Arg Pro
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Gly Ile Tyr Thr Arg Val Thr Tyr Tyr Leu Asp Trp Ile His His Tyr
225 230 235 240

Val Pro Lys Lys Pro
245

<210> 36

<211> 771

<212> DNA

<213> Homo sapiens.

<220>

<221> CDS

<222> (7)..(753)

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1 5 10	
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Lys Trp Pro Trp Gln Val Ser Leu Arg Val His Gly Pro Tyr Trp Met	
15 20 25 30	
cac ttc tgc ggg ggc tcc ctc atc cac ccc cag tgg gtg ctg acc gcc	144
His Phe Cys Gly Gly Ser Leu Ile His Pro Gln Trp Val Leu Thr Ala	
35 40 45	
gcg gcg tgc gtg gga ccg gac gtc aag gat ctg gcc gcc ctc agg gtg	192
Ala Ala Cys Val Gly Pro Asp Val Lys Asp Leu Ala Ala Leu Arg Val	
50 55 60	
caa ctg cgg gag cag cac ctc tac tac cag gac cag ctg ctg ccg gtc	240
Gln Leu Arg Glu Gln His Leu Tyr Tyr Gln Asp Gln Leu Leu Pro Val	
65 70 75	
agc agg atc atc gtg cac cca cag ttc tac acc gcc cag atc gga gcg	288
Ser Arg Ile Ile Val His Pro Gln Phe Tyr Thr Ala Gln Ile Gly Ala	
80 85 90	
gac atc gcc ctg ctg gag ctg gag gag ccg gtg aac gtc tcc agc cac	336
Asp Ile Ala Leu Leu Glu Leu Glu Glu Pro Val Asn Val Ser Ser His	
95 100 105 110	
gtc cac acg gtc acc ctg ccc cct gcc tca gag acc ttc ccc ccg ggg	384
Val His Thr Val Thr Leu Pro Pro Ala Ser Glu Thr Phe Pro Pro Gly	
115 120 125	
atg ccg tgc tgg gtc act ggc tgg ggc gat gtg gac aat gat gag cgc	432
Met Pro Cys Trp Val Thr Gly Trp Gly Asp Val Asp Asn Asp Glu Arg	
130 135 140	
ctc cca ccg cca ttt cct ctg aag cag gtg aag gtc ccc ata atg gaa	480
Leu Pro Pro Pro Phe Pro Leu Lys Gln Val Lys Val Pro Ile Met Glu	
145 150 155	
aac cac att tgt gac gca aaa tac cac ctt ggc gcc tac acg gga gac	528
Asn His Ile Cys Asp Ala Lys Tyr His Leu Gly Ala Tyr Thr Gly Asp	
160 165 170	

gac gtc cgc atc gtc cgt gac gac atg ctg tgt gcc ggg aac acc cgg 576
 Asp Val Arg Ile Val Arg Asp Asp Met Leu Cys Ala Gly Asn Thr Arg
 175 180 185 190

agg gac tca tgc cag ggc gac tcc gga ggg ccc ctg gtg tgc aag gtg 624
 Arg Asp Ser Cys Gln Gly Asp Ser Gly Gly Pro Leu Val Cys Lys Val
 195 200 205

aat ggc acc tgg ctg cag gcg ggc gtg gtc agc tgg ggc gag ggc tgt 672
 Asn Gly Thr Trp Leu Gln Ala Gly Val Val Ser Trp Gly Glu Gly Cys
 210 215 220

gcc cag ccc aac cgg cct ggc atc tac acc cgt gtc acc tac tac ttg 720
 Ala Gln Pro Asn Arg Pro Gly Ile Tyr Thr Arg Val Thr Tyr Tyr Leu
 225 230 235

gac tgg atc cac cac tat gtc ccc aaa aag ccg tgaagcggcc gccgtcgt 771
 Asp Trp Ile His His Tyr Val Pro Lys Lys Pro
 240 245

<210> 37
 <211> 249
 <212> PRT
 <213> Homo sapiens

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 Leu Glu Lys Arg Ile Val Gly Gly Gln Glu Ala Pro Arg Ser Lys Trp
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Pro Trp Gln Val Ser Leu Arg Val His Gly Pro Tyr Trp Met His Phe
 20 25 30

Cys Gly Gly Ser Leu Ile His Pro Gln Trp Val Leu Thr Ala Ala Ala
 35 40 45

Cys Val Gly Pro Asp Val Lys Asp Leu Ala Ala Leu Arg Val Gln Leu
 50 55 60

Arg Glu Gln His Leu Tyr Tyr Gln Asp Gln Leu Leu Pro Val Ser Arg
 65 70 75 80

Ile Ile Val His Pro Gln Phe Tyr Thr Ala Gln Ile Gly Ala Asp Ile
 85 90 95

Ala Leu Leu Glu Leu Glu Glu Pro Val Asn Val Ser Ser His Val His
 100 105 110

DDB/EBI/EMBL/GenBank

Thr Val Thr Leu Pro Pro Ala Ser Glu Thr Phe Pro Pro Gly Met Pro
 115 120 125
 Cys Trp Val Thr Gly Trp Gly Asp Val Asp Asn Asp Glu Arg Leu Pro
 130 135 140
 Pro Pro Phe Pro Leu Lys Gln Val Lys Val Pro Ile Met Glu Asn His
 145 150 155 160
 Ile Cys Asp Ala Lys Tyr His Leu Gly Ala Tyr Thr Gly Asp Asp Val
 165 170 175
 Arg Ile Val Arg Asp Asp Met Leu Cys Ala Gly Asn Thr Arg Arg Asp
 180 185 190
 Ser Cys Gln Gly Asp Ser Gly Gly Pro Leu Val Cys Lys Val Asn Gly
 195 200 205
 Thr Trp Leu Gln Ala Gly Val Val Ser Trp Gly Glu Gly Cys Ala Gln
 210 215 220
 Pro Asn Arg Pro Gly Ile Tyr Thr Arg Val Thr Tyr Tyr Leu Asp Trp
 225 230 235 240
 Ile His His Tyr Val Pro Lys Lys Pro
 245

<210> 38
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<220>
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 <222> (7)..(753)

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 Lys Trp Pro Trp Gln Val Ser Leu Arg Val His Gly Pro Tyr Trp Met
 15 20 25 30
 cac ttc tgc ggg ggc tcc ctc atc cac ccc cag tgg gtg ctg acc gca 144
 His Phe Cys Gly Gly Ser Leu Ile His Pro Gln Trp Val Leu Thr Ala

	35	40	45	
gcg cac tgc gtg gga ccg gac gtc aag gat ctg gcc gcc ctc agg gtg				192
Ala His Cys Val Gly Pro Asp Val Lys Asp Leu Ala Ala Leu Arg Val				
	50	55	60	
caa ctg cgg gag cag cac ctc tac tac cag gac cag ctg ctg ccg gtc				240
Gln Leu Arg Glu Gln His Leu Tyr Tyr Gln Asp Gln Leu Leu Pro Val				
	65	70	75	
agc agg atc atc gtg cac cca cag ttc tac acc gcc cag atc gga gcg				288
Ser Arg Ile Ile Val His Pro Gln Phe Tyr Thr Ala Gln Ile Gly Ala				
	80	85	90	
gca atc gcc ctg ctg gag ctg gag gag ccg gtg aac gtc tcc agc cac				336
Ala Ile Ala Leu Leu Glu Leu Glu Glu Pro Val Asn Val Ser Ser His				
	95	100	105	110
gtc cac acg gtc acc ctg ccc cct gcc tca gag acc ttc ccc ccg ggg				384
Val His Thr Val Thr Leu Pro Pro Ala Ser Glu Thr Phe Pro Pro Gly				
	115	120	125	
atg ccg tgc tgg gtc act ggc tgg ggc gat gtg gac aat gat gag cgc				432
Met Pro Cys Trp Val Thr Gly Trp Gly Asp Val Asp Asn Asp Glu Arg				
	130	135	140	
ctc cca ccg cca ttt cct ctg aag cag gtg aag gtc ccc ata atg gaa				480
Leu Pro Pro Pro Phe Pro Leu Lys Gln Val Lys Val Pro Ile Met Glu				
	145	150	155	
aac cac att tgt gac gca aaa tac cac ctt ggc gcc tac acg gga gac				528
Asn His Ile Cys Asp Ala Lys Tyr His Leu Gly Ala Tyr Thr Gly Asp				
	160	165	170	
gac gtc cgc atc gtc cgt gac gac atg ctg tgt gcc ggg aac acc ccg				576
Asp Val Arg Ile Val Arg Asp Asp Met Leu Cys Ala Gly Asn Thr Arg				
	175	180	185	190
agg gac tca tgc cag ggc gac tcc gga ggg ccc ctg gtg tgc aag gtg				624
Arg Asp Ser Cys Gln Gly Asp Ser Gly Gly Pro Leu Val Cys Lys Val				
	195	200	205	
aat ggc acc tgg ctg cag gcg ggc gtg gtc agc tgg ggc gag ggc tgt				672
Asn Gly Thr Trp Leu Gln Ala Gly Val Val Ser Trp Gly Glu Gly Cys				
	210	215	220	
gcc cag ccc aac ccg cct ggc atc tac acc cgt gtc acc tac tac ttg				720
Ala Gln Pro Asn Arg Pro Gly Ile Tyr Thr Arg Val Thr Tyr Tyr Leu				

225

230

235

gac tgg atc cac cac tat gtc ccc aaa aag ccg tgaagcggcc gccgtcgt 771
 Asp Trp Ile His His Tyr Val Pro Lys Lys Pro
 240 245

<210> 39
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 <213> Homo sapiens

<400> 39
 Leu Glu Lys Arg Ile Val Gly Gly Gln Glu Ala Pro Arg Ser Lys Trp
 1 5 10 15
 Pro Trp Gln Val Ser Leu Arg Val His Gly Pro Tyr Trp Met His Phe
 20 25 30
 Cys Gly Gly Ser Leu Ile His Pro Gln Trp Val Leu Thr Ala Ala His
 35 40 45
 Cys Val Gly Pro Asp Val Lys Asp Leu Ala Ala Leu Arg Val Gln Leu
 50 55 60
 Arg Glu Gln His Leu Tyr Tyr Gln Asp Gln Leu Leu Pro Val Ser Arg
 65 70 75 80
 Ile Ile Val His Pro Gln Phe Tyr Thr Ala Gln Ile Gly Ala Ala Ile
 85 90 95
 Ala Leu Leu Glu Leu Glu Glu Pro Val Asn Val Ser Ser His Val His
 100 105 110
 Thr Val Thr Leu Pro Pro Ala Ser Glu Thr Phe Pro Pro Gly Met Pro
 115 120 125
 Cys Trp Val Thr Gly Trp Gly Asp Val Asp Asn Asp Glu Arg Leu Pro
 130 135 140
 Pro Pro Phe Pro Leu Lys Gln Val Lys Val Pro Ile Met Glu Asn His
 145 150 155 160
 Ile Cys Asp Ala Lys Tyr His Leu Gly Ala Tyr Thr Gly Asp Asp Val
 165 170 175
 Arg Ile Val Arg Asp Asp Met Leu Cys Ala Gly Asn Thr Arg Arg Asp
 180 185 190

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Ser Cys Gln Gly Asp Ser Gly Gly Pro Leu Val Cys Lys Val Asn Gly
195 200 205

Thr Trp Leu Gln Ala Gly Val Val Ser Trp Gly Glu Gly Cys Ala Gln
210 215 220

Pro Asn Arg Pro Gly Ile Tyr Thr Arg Val Thr Tyr Tyr Leu Asp Trp
225 230 235 240

Ile His His Tyr Val Pro Lys Lys Pro
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<210> 40

<211> 771

<212> DNA

<213> Homo sapiens

<220>

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<222> (7)..(753)

<400> 40

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Leu Glu Lys Arg Ile Val Gly Gly Gln Glu Ala Pro Arg Ser
1 5 10

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Lys Trp Pro Trp Gln Val Ser Leu Arg Val His Gly Pro Tyr Trp Met
15 20 25 30

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His Phe Cys Gly Gly Ser Leu Ile His Pro Gln Trp Val Leu Thr Ala
35 40 45

gcg cac tgc gtg gga ccg gac gtc aag gat ctg gcc gcc ctc agg gtg 192
Ala His Cys Val Gly Pro Asp Val Lys Asp Leu Ala Ala Leu Arg Val
50 55 60

caa ctg cgg gag cag cac ctc tac tac cag gac cag ctg ctg ccg gtc 240
Gln Leu Arg Glu Gln His Leu Tyr Tyr Gln Asp Gln Leu Leu Pro Val
65 70 75

agc agg atc atc gtg cac cca cag ttc tac acc gcc cag atc gga gcg 288
Ser Arg Ile Ile Val His Pro Gln Phe Tyr Thr Ala Gln Ile Gly Ala
80 85 90

gac atc gcc ctg ctg gag ctg gag gag ccg gtg aac gtc tcc agc cac 336
Asp Ile Ala Leu Leu Glu Leu Glu Glu Pro Val Asn Val Ser Ser His
95 100 105 110

gtc cac acg gtc acc ctg ccc cct gcc tca gag acc ttc ccc ccg ggg 384
Val His Thr Val Thr Leu Pro Pro Ala Ser Glu Thr Phe Pro Pro Gly
115 120 125

atg ccg tgc tgg gtc act ggc tgg ggc gat gtg gac aat gat gag cgc 432
Met Pro Cys Trp Val Thr Gly Trp Gly Asp Val Asp Asn Asp Glu Arg
130 135 140

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Leu Pro Pro Pro Phe Pro Leu Lys Gln Val Lys Val Pro Ile Met Glu
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Asn His Ile Cys Asp Ala Lys Tyr His Leu Gly Ala Tyr Thr Gly Asp
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Asp Val Arg Ile Val Arg Asp Asp Met Leu Cys Ala Gly Asn Thr Arg
175 180 185 190

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Arg Asp Ser Cys Gln Gly Asp Ala Gly Gly Pro Leu Val Cys Lys Val
195 200 205

aat ggc acc tgg ctg cag gcg ggc gtg gtc agc tgg ggc gag ggc tgt 672
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210 215 220

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Ala Gln Pro Asn Arg Pro Gly Ile Tyr Thr Arg Val Thr Tyr Tyr Leu
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gac tgg atc cac cac tat gtc ccc aaa aag ccg tgaagcggcc gccgtcgt 771
Asp Trp Ile His His Tyr Val Pro Lys Lys Pro
240 245

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<212> PRT
<213> Homo sapiens

<400> 41
Leu Glu Lys Arg Ile Val Gly Gly Gln Glu Ala Pro Arg Ser Lys Trp

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 50 55 60
 Arg Glu Gln His Leu Tyr Tyr Gln Asp Gln Leu Leu Pro Val Ser Arg
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 Ile Ile Val His Pro Gln Phe Tyr Thr Ala Gln Ile Gly Ala Asp Ile
 85 90 95
 Ala Leu Leu Glu Leu Glu Glu Pro Val Asn Val Ser Ser His Val His
 100 105 110
 Thr Val Thr Leu Pro Pro Ala Ser Glu Thr Phe Pro Pro Gly Met Pro
 115 120 125
 Cys Trp Val Thr Gly Trp Gly Asp Val Asp Asn Asp Glu Arg Leu Pro
 130 135 140
 Pro Pro Phe Pro Leu Lys Gln Val Lys Val Pro Ile Met Glu Asn His
 145 150 155 160
 Ile Cys Asp Ala Lys Tyr His Leu Gly Ala Tyr Thr Gly Asp Asp Val
 165 170 175
 Arg Ile Val Arg Asp Asp Met Leu Cys Ala Gly Asn Thr Arg Arg Asp
 180 185 190
 Ser Cys Gln Gly Asp Ala Gly Gly Pro Leu Val Cys Lys Val Asn Gly
 195 200 205
 Thr Trp Leu Gln Ala Gly Val Val Ser Trp Gly Glu Gly Cys Ala Gln
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 225 230 235 240
 Ile His His Tyr Val Pro Lys Lys Pro
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 <211> 771
 <212> DNA
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<220>
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 <222> (7)..(753)

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 Lys Trp Pro Trp Gln Val Ser Leu Arg Val His Gly Pro Tyr Trp Met
 15 20 25 30

cac ttc tgc ggg ggc tcc ctc atc cac ccc cag tgg gtg ctg acc gca 144
 His Phe Cys Gly Gly Ser Leu Ile His Pro Gln Trp Val Leu Thr Ala
 35 40 45

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 Ala His Cys Val Gly Pro Asp Val Lys Asp Leu Ala Ala Leu Arg Val
 50 55 60

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 Gln Leu Arg Glu Gln His Leu Tyr Tyr Gln Asp Gln Leu Leu Pro Val
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 Ser Arg Ile Ile Val His Pro Gln Phe Tyr Thr Ala Gln Ile Gly Ala
 80 85 90

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 Asp Ile Ala Leu Leu Glu Leu Glu Glu Pro Val Asn Val Ser Ser His
 95 100 105 110

gtc cac acg gtc acc ctg ccc cct gcc tca gag acc ttc ccc ccg ggg 384
 Val His Thr Val Thr Leu Pro Pro Ala Ser Glu Thr Phe Pro Pro Gly
 115 120 125

atg ccg tgc tgg gtc act ggc tgg ggc gat gtg gac aat gat gag cgc 432
 Met Pro Cys Trp Val Thr Gly Trp Gly Asp Val Asp Asn Asp Glu Arg
 130 135 140

ctc cca ccg cca ttt cct ctg aag cag gtg aag gtc ccc ata atg gaa 480
 Leu Pro Pro Pro Phe Pro Leu Lys Gln Val Lys Val Pro Ile Met Glu


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Ile Ile Val His Pro Gln Phe Tyr Thr Ala Gln Ile Gly Ala Asp Ile
      85                      90                      95

Ala Leu Leu Glu Leu Glu Glu Pro Val Asn Val Ser Ser His Val His
      100                      105                      110

Thr Val Thr Leu Pro Pro Ala Ser Glu Thr Phe Pro Pro Gly Met Pro
      115                      120                      125

Cys Trp Val Thr Gly Trp Gly Asp Val Asp Asn Asp Glu Arg Leu Pro
      130                      135                      140

Pro Pro Phe Pro Leu Lys Gln Val Lys Val Pro Ile Met Glu Asn His
      145                      150                      155                      160

Ile Cys Asp Ala Lys Tyr His Leu Gly Ala Tyr Thr Gly Asp Asp Val
      165                      170                      175

Arg Ile Val Arg Asp Asp Met Leu Cys Ala Gly Asn Thr Arg Arg Asp
      180                      185                      190

Ser Cys Gln Gly Asp Ala Gly Gly Pro Leu Val Cys Lys Val Asn Gly
      195                      200                      205

Thr Trp Leu Gln Ala Gly Val Val Ser Trp Gly Glu Gly Cys Ala Gln
      210                      215                      220

Pro Asn Arg Pro Gly Ile Tyr Thr Arg Val Thr Tyr Tyr Leu Asp Trp
      225                      230                      235                      240

Ile His His Tyr Val Pro Lys Lys Pro
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<210> 44
<211> 735
<212> DNA
<213> Homo sapiens

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<220>
<221> CDS
<222> (1)..(735)

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Ile Val Gly Gly Gln Glu Ala Pro Arg Ser Lys Trp Pro Trp Gln Val
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agc ctg aga gtc cac ggc cca tac tgg atg cac ttc tgc ggg ggc tcc 96
 Ser Leu Arg Val His Gly Pro Tyr Trp Met His Phe Cys Gly Gly Ser
 20 25 30

ctc atc cac ccc cag tgg gtg ctg acc gcc gcg gcg tgc gtg gga ccg 144
 Leu Ile His Pro Gln Trp Val Leu Thr Ala Ala Ala Cys Val Gly Pro
 35 40 45

gac gtc aag gat ctg gcc gcc ctc agg gtg caa ctg cgg gag cag cac 192
 Asp Val Lys Asp Leu Ala Ala Leu Arg Val Gln Leu Arg Glu Gln His
 50 55 60

ctc tac tac cag gac cag ctg ctg ccg gtc agc agg atc atc gtg cac 240
 Leu Tyr Tyr Gln Asp Gln Leu Leu Pro Val Ser Arg Ile Ile Val His
 65 70 75 80

cca cag ttc tac acc gcc cag atc gga gcg gac atc gcc ctg ctg gag 288
 Pro Gln Phe Tyr Thr Ala Gln Ile Gly Ala Asp Ile Ala Leu Leu Glu
 85 90 95

ctg gag gag ccg gtg aac gtc tcc agc cac gtc cac acg gtc acc ctg 336
 Leu Glu Glu Pro Val Asn Val Ser Ser His Val His Thr Val Thr Leu
 100 105 110

ccc cct gcc tca gag acc ttc ccc ccg ggg atg ccg tgc tgg gtc act 384
 Pro Pro Ala Ser Glu Thr Phe Pro Pro Gly Met Pro Cys Trp Val Thr
 115 120 125

ggc tgg ggc gat gtg gac aat gat gag cgc ctc cca ccg cca ttt cct 432
 Gly Trp Gly Asp Val Asp Asn Asp Glu Arg Leu Pro Pro Pro Phe Pro
 130 135 140

ctg aag cag gtg aag gtc ccc ata atg gaa aac cac att tgt gac gca 480
 Leu Lys Gln Val Lys Val Pro Ile Met Glu Asn His Ile Cys Asp Ala
 145 150 155 160

aaa tac cac ctt ggc gcc tac acg gga gac gac gtc cgc atc gtc cgt 528
 Lys Tyr His Leu Gly Ala Tyr Thr Gly Asp Asp Val Arg Ile Val Arg
 165 170 175

gac gac atg ctg tgt gcc ggg aac acc ccg agg gac tca tgc cag ggc 576
 Asp Asp Met Leu Cys Ala Gly Asn Thr Arg Arg Asp Ser Cys Gln Gly
 180 185 190

gac tcc gga ggg ccc ctg gtg tgc aag gtg aat ggc acc tgg ctg cag 624
 Asp Ser Gly Gly Pro Leu Val Cys Lys Val Asn Gly Thr Trp Leu Gln
 195 200 205

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gcg ggc gtg gtc agc tgg ggc gag ggc tgt gcc cag ccc aac cgg cct 672
 Ala Gly Val Val Ser Trp Gly Glu Gly Cys Ala Gln Pro Asn Arg Pro
 210 215 220

ggc atc tac acc cgt gtc acc tac tac ttg gac tgg atc cac cac tat 720
 Gly Ile Tyr Thr Arg Val Thr Tyr Tyr Leu Asp Trp Ile His His Tyr
 225 230 235 240

gtc ccc aaa aag ccg 735
 Val Pro Lys Lys Pro
 245

<210> 45
 <211> 245
 <212> PRT
 <213> Homo sapiens

<400> 45
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Ser Leu Arg Val His Gly Pro Tyr Trp Met His Phe Cys Gly Gly Ser
 20 25 30

Leu Ile His Pro Gln Trp Val Leu Thr Ala Ala Ala Cys Val Gly Pro
 35 40 45

Asp Val Lys Asp Leu Ala Ala Leu Arg Val Gln Leu Arg Glu Gln His
 50 55 60

Leu Tyr Tyr Gln Asp Gln Leu Leu Pro Val Ser Arg Ile Ile Val His
 65 70 75 80

Pro Gln Phe Tyr Thr Ala Gln Ile Gly Ala Asp Ile Ala Leu Leu Glu
 85 90 95

Leu Glu Glu Pro Val Asn Val Ser Ser His Val His Thr Val Thr Leu
 100 105 110

Pro Pro Ala Ser Glu Thr Phe Pro Pro Gly Met Pro Cys Trp Val Thr
 115 120 125

Gly Trp Gly Asp Val Asp Asn Asp Glu Arg Leu Pro Pro Pro Phe Pro
 130 135 140

Leu Lys Gln Val Lys Val Pro Ile Met Glu Asn His Ile Cys Asp Ala
 145 150 155 160

Lys Tyr His Leu Gly Ala Tyr Thr Gly Asp Asp Val Arg Ile Val Arg
 165 170 175

Asp Asp Met Leu Cys Ala Gly Asn Thr Arg Arg Asp Ser Cys Gln Gly
 180 185 190

Asp Ser Gly Gly Pro Leu Val Cys Lys Val Asn Gly Thr Trp Leu Gln
 195 200 205

Ala Gly Val Val Ser Trp Gly Glu Gly Cys Ala Gln Pro Asn Arg Pro
 210 215 220

Gly Ile Tyr Thr Arg Val Thr Tyr Tyr Leu Asp Trp Ile His His Tyr
 225 230 235 240

Val Pro Lys Lys Pro
 245

<210> 46

<211> 735

<212> DNA

<213> Homo sapiens

<220>

<221> CDS

<222> (1)..(735)

<400> 46

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agc ctg aga gtc cac ggc cca tac tgg atg cac ttc tgc ggg ggc tcc 96
 Ser Leu Arg Val His Gly Pro Tyr Trp Met His Phe Cys Gly Gly Ser
 20 25 30

ctc atc cac ccc cag tgg gtg ctg acc gca gcg cac tgc gtg gga ccg 144
 Leu Ile His Pro Gln Trp Val Leu Thr Ala Ala His Cys Val Gly Pro
 35 40 45

gac gtc aag gat ctg gcc gcc ctc agg gtg caa ctg cgg gag cag cac 192
 Asp Val Lys Asp Leu Ala Ala Leu Arg Val Gln Leu Arg Glu Gln His
 50 55 60

ctc tac tac cag gac cag ctg ctg ccg gtc agc agg atc atc gtg cac 240
 Leu Tyr Tyr Gln Asp Gln Leu Leu Pro Val Ser Arg Ile Ile Val His

G E N E B A N K

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cca cag ttc tac acc gcc cag atc gga gcg gca atc gcc ctg ctg gag	288						
Pro Gln Phe Tyr Thr Ala Gln Ile Gly Ala Ala Ile Ala Leu Leu Glu							
		85		90		95	
ctg gag gag ccg gtg aac gtc tcc agc cac gtc cac acg gtc acc ctg	336						
Leu Glu Glu Pro Val Asn Val Ser Ser His Val His Thr Val Thr Leu							
		100		105		110	
ccc cct gcc tca gag acc ttc ccc ccg ggg atg ccg tgc tgg gtc act	384						
Pro Pro Ala Ser Glu Thr Phe Pro Pro Gly Met Pro Cys Trp Val Thr							
		115		120		125	
ggc tgg ggc gat gtg gac aat gat gag cgc ctc cca ccg cca ttt cct	432						
Gly Trp Gly Asp Val Asp Asn Asp Glu Arg Leu Pro Pro Phe Pro							
		130		135		140	
ctg aag cag gtg aag gtc ccc ata atg gaa aac cac att tgt gac gca	480						
Leu Lys Gln Val Lys Val Pro Ile Met Glu Asn His Ile Cys Asp Ala							
		145		150		155	160
aaa tac cac ctt ggc gcc tac acg gga gac gac gtc cgc atc gtc cgt	528						
Lys Tyr His Leu Gly Ala Tyr Thr Gly Asp Asp Val Arg Ile Val Arg							
		165		170		175	
gac gac atg ctg tgt gcc ggg aac acc ccg agg gac tca tgc cag ggc	576						
Asp Asp Met Leu Cys Ala Gly Asn Thr Arg Arg Asp Ser Cys Gln Gly							
		180		185		190	
gac tcc gga ggg ccc ctg gtg tgc aag gtg aat ggc acc tgg ctg cag	624						
Asp Ser Gly Gly Pro Leu Val Cys Lys Val Asn Gly Thr Trp Leu Gln							
		195		200		205	
gcg ggc gtg gtc agc tgg ggc gag ggc tgt gcc cag ccc aac ccg cct	672						
Ala Gly Val Val Ser Trp Gly Glu Gly Cys Ala Gln Pro Asn Arg Pro							
		210		215		220	
ggc atc tac acc cgt gtc acc tac tac ttg gac tgg atc cac cac tat	720						
Gly Ile Tyr Thr Arg Val Thr Tyr Tyr Leu Asp Trp Ile His His Tyr							
		225		230		235	240
gtc ccc aaa aag ccg	735						
Val Pro Lys Lys Pro							
		245					

<210> 47

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ctg aag cag gtg aag gtc ccc ata atg gaa aac cac att tgt gac gca 480
 Leu Lys Gln Val Lys Val Pro Ile Met Glu Asn His Ile Cys Asp Ala
 145 150 155 160

aaa tac cac ctt ggc gcc tac acg gga gac gac gtc cgc atc gtc cgt 528
 Lys Tyr His Leu Gly Ala Tyr Thr Gly Asp Asp Val Arg Ile Val Arg
 165 170 175

gac gac atg ctg tgt gcc ggg aac acc cgg agg gac tca tgt caa ggc 576
 Asp Asp Met Leu Cys Ala Gly Asn Thr Arg Arg Asp Ser Cys Gln Gly
 180 185 190

gac gcc ggc gga cct ctg gtg tgc aag gtg aat ggc acc tgg ctg cag 624
 Asp Ala Gly Gly Pro Leu Val Cys Lys Val Asn Gly Thr Trp Leu Gln
 195 200 205

gcg ggc gtg gtc agc tgg ggc gag ggc tgt gcc cag ccc aac cgg cct 672
 Ala Gly Val Val Ser Trp Gly Glu Gly Cys Ala Gln Pro Asn Arg Pro
 210 215 220

ggc atc tac acc cgt gtc acc tac tac ttg gac tgg atc cac cac tat 720
 Gly Ile Tyr Thr Arg Val Thr Tyr Tyr Leu Asp Trp Ile His His Tyr
 225 230 235 240

gtc ccc aaa aag ccg 735
 Val Pro Lys Lys Pro
 245

<210> 49
 <211> 245
 <212> PRT
 <213> Homo sapiens

<400> 49
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 Ser Leu Arg Val His Gly Pro Tyr Trp Met His Phe Cys Gly Gly Ser
 20 25 30
 Leu Ile His Pro Gln Trp Val Leu Thr Ala Ala His Cys Val Gly Pro
 35 40 45

Asp Val Lys Asp Leu Ala Ala Leu Arg Val Gln Leu Arg Glu Gln His
 50 55 60
 Leu Tyr Tyr Gln Asp Gln Leu Leu Pro Val Ser Arg Ile Ile Val His
 65 70 75 80
 Pro Gln Phe Tyr Thr Ala Gln Ile Gly Ala Asp Ile Ala Leu Leu Glu
 85 90 95
 Leu Glu Glu Pro Val Asn Val Ser Ser His Val His Thr Val Thr Leu
 100 105 110
 Pro Pro Ala Ser Glu Thr Phe Pro Pro Gly Met Pro Cys Trp Val Thr
 115 120 125
 Gly Trp Gly Asp Val Asp Asn Asp Glu Arg Leu Pro Pro Phe Pro
 130 135 140
 Leu Lys Gln Val Lys Val Pro Ile Met Glu Asn His Ile Cys Asp Ala
 145 150 155 160
 Lys Tyr His Leu Gly Ala Tyr Thr Gly Asp Asp Val Arg Ile Val Arg
 165 170 175
 Asp Asp Met Leu Cys Ala Gly Asn Thr Arg Arg Asp Ser Cys Gln Gly
 180 185 190
 Asp Ala Gly Gly Pro Leu Val Cys Lys Val Asn Gly Thr Trp Leu Gln
 195 200 205
 Ala Gly Val Val Ser Trp Gly Glu Gly Cys Ala Gln Pro Asn Arg Pro
 210 215 220
 Gly Ile Tyr Thr Arg Val Thr Tyr Tyr Leu Asp Trp Ile His His Tyr
 225 230 235 240
 Val Pro Lys Lys Pro
 245

<210> 50
 <211> 735
 <212> DNA
 <213> Homo sapiens

<220>
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 <222> (1)..(735)

<400> 50

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Ser Leu Arg Val His Gly Pro Tyr Trp Met His Phe Cys Gly Gly Ser	
20 25 30	
ctc atc cac ccc cag tgg gtg ctg acc gca gcg cac tgc gtg gga ccg	144
Leu Ile His Pro Gln Trp Val Leu Thr Ala Ala His Cys Val Gly Pro	
35 40 45	
gac gtc aag gat ctg gcc gcc ctc agg gtg caa ctg cgg gag cag cac	192
Asp Val Lys Asp Leu Ala Ala Leu Arg Val Gln Leu Arg Glu Gln His	
50 55 60	
ctc tac tac cag gac cag ctg ctg ccg gtc agc agg atc atc gtg cac	240
Leu Tyr Tyr Gln Asp Gln Leu Leu Pro Val Ser Arg Ile Ile Val His	
65 70 75 80	
cca cag ttc tac acc gcc cag atc gga gcg gac atc gcc ctg ctg gag	288
Pro Gln Phe Tyr Thr Ala Gln Ile Gly Ala Asp Ile Ala Leu Leu Glu	
85 90 95	
ctg gag gag ccg gtg aac gtc tcc agc cac gtc cac acg gtc acc ctg	336
Leu Glu Glu Pro Val Asn Val Ser Ser His Val His Thr Val Thr Leu	
100 105 110	
ccc cct gcc tca gag acc ttc ccc ccg ggg atg ccg tgc tgg gtc act	384
Pro Pro Ala Ser Glu Thr Phe Pro Pro Gly Met Pro Cys Trp Val Thr	
115 120 125	
ggc tgg ggc gat gtg gac aat gat gag cgc ctc cca ccg cca ttt cct	432
Gly Trp Gly Asp Val Asp Asn Asp Glu Arg Leu Pro Pro Pro Phe Pro	
130 135 140	
ctg aag cag gtg aag gtc ccc ata atg gaa aac cac att tgt gac gca	480
Leu Lys Gln Val Lys Val Pro Ile Met Glu Asn His Ile Cys Asp Ala	
145 150 155 160	
aaa tac cac ctt ggc gcc tac acg gga gac gac gtc cgc atc gtc cgt	528
Lys Tyr His Leu Gly Ala Tyr Thr Gly Asp Asp Val Arg Ile Val Arg	
165 170 175	
gac gac atg ctg tgt gcc ggg aac acc ccg agg gac tca tgc caa gga	576
Asp Asp Met Leu Cys Ala Gly Asn Thr Arg Arg Asp Ser Cys Gln Gly	

180 185 190
gac gcc ggc gga cca ctg gtg tgc aag gtg aat ggc acc tgg ctg cag 624
Asp Ala Gly Gly Pro Leu Val Cys Lys Val Asn Gly Thr Trp Leu Gln
195 200 205
gcg ggc gtg gtc agc tgg ggc gag ggc tgt gcc cag ccc aac cgg cct 672
Ala Gly Val Val Ser Trp Gly Glu Gly Cys Ala Gln Pro Asn Arg Pro
210 215 220
ggc atc tac acc cgt gtc acc tac tac ttg gac tgg atc cac cac tat 720
Gly Ile Tyr Thr Arg Val Thr Tyr Tyr Leu Asp Trp Ile His His Tyr
225 230 235 240
gtc ccc aaa aag ccg 735
Val Pro Lys Lys Pro
245

<210> 51
<211> 245
<212> PRT
<213> Homo sapiens

<400> 51
Ile Val Gly Gly Gln Glu Ala Pro Arg Ser Lys Trp Pro Trp Cln Val
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Ser Leu Arg Val His Gly Pro Tyr Trp Met His Phe Cys Gly Gly Ser
20 25 30
Leu Ile His Pro Gln Trp Val Leu Thr Ala Ala His Cys Val Gly Pro
35 40 45
Asp Val Lys Asp Leu Ala Ala Leu Arg Val Gln Leu Arg Glu Gln His
50 55 60
Leu Tyr Tyr Gln Asp Gln Leu Leu Pro Val Ser Arg Ile Ile Val His
65 70 75 80
Pro Gln Phe Tyr Thr Ala Gln Ile Gly Ala Asp Ile Ala Leu Leu Glu
85 90 95
Leu Glu Glu Pro Val Asn Val Ser Ser His Val His Thr Val Thr Leu
100 105 110
Pro Pro Ala Ser Glu Thr Phe Pro Pro Gly Met Pro Cys Trp Val Thr
115 120 125

Gly Trp Gly Asp Val Asp Asn Asp Glu Arg Leu Pro Pro Pro Phe Pro
130 135 140

Leu Lys Gln Val Lys Val Pro Ile Met Glu Asn His Ile Cys Asp Ala
145 150 155 160

Lys Tyr His Leu Gly Ala Tyr Thr Gly Asp Asp Val Arg Ile Val Arg
165 170 175

Asp Asp Met Leu Cys Ala Gly Asn Thr Arg Arg Asp Ser Cys Gln Gly
180 185 190

Asp Ala Gly Gly Pro Leu Val Cys Lys Val Asn Gly Thr Trp Leu Gln
195 200 205

Ala Gly Val Val Ser Trp Gly Glu Gly Cys Ala Gln Pro Asn Arg Pro
210 215 220

Gly Ile Tyr Thr Arg Val Thr Tyr Tyr Leu Asp Trp Ile His His Tyr
225 230 235 240

Val Pro Lys Lys Pro
245